



NOAA, Partners & Grantee Presentations at NSTA Atlanta

Thursday

Science Is for Everyone!

Thursday, March 15 1:00 PM - 1:30 PM

Georgia World Congress Center, C207

How can you provide equal access to science learning for all your students? Learn tips for teaching science to students with a variety of disabilities. *Presenter: Lindsay Knippenberg (Mooresville High School: Mooresville, NC; NOAA Teacher at Sea Alumna)*

Science in the One-to-One Classroom

Thursday, March 15 2:30 PM - 3:00 PM

Georgia World Congress Center, C213

What does a successful one-to-one science classroom look like? Gain management tips, activities, and lesson ideas for incorporating technology in your science class. *Presenter: Lindsay Knippenberg (Mooresville High School: Mooresville, NC; NOAA Teacher at Sea Alumna)*

JetStream: An Online School for Weather

Thursday, March 15 3:30 PM - 4:30 PM

Georgia World Congress Center, C205

JetStream is a free online resource from the National Weather Service that has lesson plans and demonstrations to teach various aspects of weather.

Presenter: Dennis Cain (NOAA National Weather Service: Fort Worth, TX)

Ocean Guardian School Program: Encouraging All Children to Explore Their Natural Surroundings to Form a Personal Connection to the Ocean

Thursday, March 15 3:30 PM - 4:30 PM

Georgia World Congress Center, B103

Encourage your students to become ocean guardians through the Ocean Guardian School program that supports schools in implementing a school- or community-based conservation project.

Presenter: Seaberry Nachbar (NOAA Office of National Marine Sanctuaries: Monterey, CA)



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Friday

Freshwater Stewardship: Equip Your Student-Scientists with Cutting-Edge Resources from NOAA

Friday, March 16 8:00 AM - 9:00 AM *Georgia World Congress Center, A412a*

Flooding. Water pollution. Freshwater is the lifeblood of our planet, and our future depends on the next generation of environmental stewards to preserve the health of watersheds. The National Oceanic and Atmospheric Administration (NOAA) has a wealth of online lesson plans, videos, data sets, webinars, and more to help inform and inspire students to action in research, stewardship, and resource management for vital freshwater ecosystems.

Presenters: Lindsay Knippenberg (NOAA Office of Education/Teacher at Sea Alumna: Washington, DC), Dennis Cain (NOAA National Weather Service: Fort Worth, TX)

Decoding Global Temperature and Carbon Dioxide Levels from a Model Ice Core

Friday, March 16 8:00 AM - 9:00 AM *Georgia World Congress Center, B103*

This modeling investigation dispels the misconception that historical global temperatures are inferred from carbon dioxide levels in trapped air bubbles rather than from isotopes of oxygen in ice layers.

Presenters: LuAnn Dahlman (NOAA Climate Program Office: Silver Spring, MD), Carla McAuliffe (TERC: Cambridge, MA)

Data Is Not a Four Letter Word: Use NOAA Resources to Build Student Proficiency in Data Analysis

Friday, March 16 9:30 AM - 10:30 AM *Georgia World Congress Center, A412a*

Scientists at the National Oceanic and Atmospheric Administration collect a stunning array of data in their work. Learn how to access this treasure trove of archived and real-time data, and explore NOAA's data-rich resources, lesson plans, and visualization tools to help you build student proficiency in scientific data analysis.

Presenter: Stephen Zepecki (NOAA Office of Education/NESDIS: Silver Spring, MD)

National Marine Sanctuaries: Bringing Ocean Technology into Your Classroom

Friday, March 16 9:30 AM - 10:30 AM *Georgia World Congress Center, B402*

Hear about technology that is used in National Marine Sanctuaries. Many of our lesson plans, expeditions, and live Telepresence shows focus on the newest technologies used to study and explore the sanctuaries.

Presenter: Claire Fackler (NOAA Office of National Marine Sanctuaries: Santa Barbara, CA)

Meet Me in the Middle Session: Roundtable Conversations, Session B

Friday, March 16 11:00 AM - 11:30 AM *Georgia World Congress Center, A411/412b*

Join middle level educators for small group conversations featuring scientific literacy, STEM/STEAM, NGSS, and much, much more. Choose a topic to discuss when you arrive.

Presenter(s): Jennifer Hammond (NOAA Teacher at Sea Program: Silver Spring, MD), Emily Susko (NOAA Teacher at Sea Program: Silver Spring, MD)

NOAA Planet Stewards—Content, Collaboration, and Action

Friday, March 16 11:00 AM - 12:00 PM *Georgia World Congress Center, B103*

Find out about professional development opportunities, online tools, and stewardship grants for educators to build scientifically-literate individuals and communities prepared to respond to the challenges of environmental threats monitored by NOAA. Try your hand with the Futures Wheel activity and receive free resources.

Presenters: Peg Steffen (NOAA National Ocean Service: Silver Spring, MD), Bruce Moravchik (NOAA National Ocean Service: Silver Spring, MD), Molly Harrison (NOAA Fisheries: Silver Spring, MD)

NESTA and NOAA Ocean, Climate, and Weather Share-a-Thon

Friday, March 16 12:30 PM - 1:30 PM *Georgia World Congress Center, B103*

Join more than 20 NESTA members and other educational specialists as they share their favorite NGSS congruent classroom activities. Lots of free resources!

Presenters: Belinda Jacobs (Cedar Ridge High School: Round Rock, TX), Michael Passow (Retired Teacher: Englewood, NJ)

Game Design and Game Jams for the Science Classroom

Friday, March 16 2:00 PM - 3:00 PM *Georgia World Congress Center, B103*

Don't let the technology teachers have all the fun! Game design can be woven into any science curricula, providing an engaging way for students to learn science content and to creatively apply what they have learned. Find out how to start using game design and game jams in your classroom.

Presenters: Peg Steffen (NOAA National Ocean Service: Silver Spring, MD), Bruce Moravchik (NOAA National Ocean Service: Silver Spring, MD), Molly Harrison (NOAA Fisheries: Silver Spring, MD)

AGU-NESTA Sponsored Lecture:

Chasing Coral Bleaching: A Present and Growing Ecological Disaster

Friday, March 16 2:00 PM - 3:00 PM

Georgia World Congress Center, Sidney Marcus Auditorium

Coral reefs are amazingly beautiful and complex ecosystems that support at least a quarter of all marine species. However, as ocean temperatures rise, corals have been expelling the algae that give them their color and their food, causing corals to die around the world at a record rate. Reefs have shown us that climate change is impacting nature and people now—it's not just some far-off problem we can worry about later. NOAA resources will be shared to understand this essential marine ecosystem, how we study them, and how we can help save them. We'll also explore a new film, *Chasing Coral* (available on Netflix), that takes students—and everyone else—on a journey to document and understand coral reefs and the problems they face.

Presenter: C. Mark Eakin, NOAA Coral Reef Watch Program (NOAA NESDIS: Silver Spring, MD)

Meet Me in the Middle Share-a-Thon

Friday, March 16 2:30 PM - 4:30 PM *Georgia World Congress Center, A411/412b*

Join us to engage in hands-on activities, collect information/resources from national/international organizations, network with NSTA Middle Level and NMLSTA leaders, review recommended middle level science materials and resources, and more, all in a single location.

Presenter: Jennifer Annetta (NOAA Teacher at Sea Program: Silver Spring, MD)

Bring the Ocean into Your Classroom with National Marine Sanctuaries

Friday, March 16 3:30 PM - 4:30 PM *Georgia World Congress Center, A412a*

Learn about free STEM educational resources and hands-on field experiences to increase ocean and climate literacy with your students. Receive free materials!

Presenter: Claire Fackler (NOAA Office of National Marine Sanctuaries: Santa Barbara, CA)



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Saturday & Sunday

STEM and Stewardship Series 1: Polar Popsicles

Saturday, March 17 8:00 AM - 9:30 AM

Georgia World Congress Center, B303

Today, climate change is arguably the most urgent global issue, and science educators are under siege by special interest groups intent on misinformation. An ice core scientist and a master polar educator will lead hands-on activities developed by scientists, engineers, and educators from the Ice Drilling Program Office (IDPO-NSF funded).

Presenter: Louise Huffman (Thayer School of Engineering at Dartmouth: Hanover, NH)

Investigate Earth Processes Using NOAA Data Resources

Saturday, March 17 9:30 AM - 10:30 AM

Georgia World Congress Center, B103

Find out how educators can access and use NOAA data in the classroom. Participants will learn about websites and resources that use data about weather, climate, drought, sea surface temperature, coastal water quality, coral bleaching, and ocean acidification and try several activities that can be used in the classroom.

Presenters: Peg Steffen (NOAA National Ocean Service: Silver Spring, MD), Bruce Moravchik (NOAA National Ocean Service: Silver Spring, MD), Molly Harrison (NOAA Fisheries: Silver Spring, MD)

STEM and Stewardship Series 2: Planet Stewards Education Project

Saturday, March 17 10:00 AM - 11:30 AM

Georgia World Congress Center, B303

Take learning out of the classroom! Find out how you can receive funding for a stewardship project with your students while learning from some of the most respected scientists in Earth/atmospheric sciences. Past funding recipients will discuss their experiences and share hands-on activities. Take home NOAA resources.

Presenters: Bruce Moravchik (NOAA National Ocean Service: Silver Spring, MD), Molly Harrison (NOAA Fisheries: Silver Spring, MD)

STEM and Stewardship Series 3: Chasing Coral Bleaching

Saturday, March 17 12:00 PM - 1:30 PM

Georgia World Congress Center, B303

Join Mark Eakin, oceanographer and coordinator of the NOAA Coral Reef Watch Program, as he discusses coral bleaching and clips from the film, *Chasing Coral*, for which he was a chief scientist. NOAA educators will share related science and hands-on education resources for your classroom.

Presenter: C. Mark Eakin (National Oceanic and Atmospheric Administration: Silver Spring, MD)

Digital Natives Use 3-D Learning to Collaborate on Climate Change

Saturday, March 17 2:00 PM - 3:00 PM

Georgia World Congress Center, A303

Get students learning, collaborating, creating, and playing on the internet to learn about climate change. NOAA Planet Stewards Educators share their successful classroom practices. Leave ready to launch a cloud-infused curriculum that meets the NGSS to engage and empower your students.

Presenters: Kottie Christie-Blick (South Orangetown Central School District: Blauvelt, NY), Jacob Tanenbaum (South Orangetown Central School District: Blauvelt, NY; NOAA Teacher at Sea Alumni)

Sunday

BIG Data/BIG Skills: Improve Student Data Literacy Using Free Web Tools from NOAA

Sunday, March 18 9:30 AM - 10:30 AM

Georgia World Congress Center, A407

“Data in the Classroom” is a free online learning platform from the National Oceanic and Atmospheric Administration. Find out how to access these digital lessons and data exploration tools, and learn more about the curriculum’s unique scaffolding that will help your middle school students navigate BIG data about dynamic Earth processes and the impact of environmental events on regional and global scales.

Presenter: Dan Pisut (formerly NOAA Viz Lab Silver Spring, MD; now Esri, Redlands, CA)